Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method for isolating and culturing a previously unculturable microorganism, which comprises:

(i) collecting a sample from an environmental source;

(ii) counting/estimating the number of microorganisms in the sample;

(iii) diluting the sample in an appropriate medium;

(iv) adding a natural gelating agent such as to entrap one or more microorganisms within a sphere of the gelating agent;

(v) coating the spheres containing the entrapped microorganism(s) with a ~~natural or~~ synthetic transparent or opaque polymer selected from the group consisting of a polysulfone, an epoxy resin, a polyacrylamide, silica gel polysulfone, and epoxy resin, to form a polymeric membrane;

(vi) incubating the coated spheres in the original environment for an appropriate time;

(vii) cutting the spheres and scanning for

microorganisms colonies; and

(viii) isolating the microorganisms, and repeating steps (iii) to (vii) until a pure clone of said previously unculturable microorganism is obtained.

2. (Original) A method according to claim 1 wherein said environmental source is a terrestrial, aquatic or marine source.

3. (Previously presented) A method according to claim 1, wherein said appropriate medium of (iii) is a medium compatible with the environment from which the sample has been collected.

4. (Currently amended) A method according to claim 1 wherein said natural gelating agent is ~~a natural, semi-synthetic or synthetic gelating agent~~ selected from the group consisting of agar, alginate, carrageenans, gum Arabic, guar gum, traganth gum, xanthan gum, ~~propyleneglycolalginate~~, and mycrocrystalline cellulose.

5. (Previously presented) A method according to claim 1 wherein said gelating agent sphere of (iv) has a size from 0.1 mm or less to about 5 mm.

6-17. (Cancelled)

18. (Previously presented) A method according to claim 1, wherein said gelating agent sphere of (iv) has a size of 1-2 mm in diameter.

19. (Canceled).